

What is claimed is:

1 1. A tonneau cover apparatus for removable attachment about a top of a
2 perimeter of a cargo box of a pickup truck, the perimeter of the cargo box
3 including a forward end, two opposing sidewalls and a tailgate, the tailgate being
4 positioned rearward of the forward end, the tonneau cover apparatus comprising:
5
6 a flexible cover, the flexible cover having first and second ends;
7
8 a support frame for attachment to the cargo box; the support frame having two
9 opposing side rails and a pair of end plate engagement members, each of which
10 is secured to one of the respective opposing side rails in a position rearward of
11 the forward end when the tonneau cover apparatus is attached to the cargo box;
12
13 an end plate attached to the second end of the flexible cover, the end plate
14 configured to cooperatively engage the respective end plate engagement
15 members when the flexible cover is drawn over the cargo box; wherein the end
16 plate engagement members cooperate to engage the end plate in a full
17 engagement position when the first end of the flexible cover is operatively
18 connected to the support frame forward of the respective end plate engagement
19 members, such that the end plate is in a fixed stretching position when the end
20 plate is in the full engagement position, wherein the flexible cover is stretched so
21 as to place a tension on the flexible cover;

first and second locking members, each of the respective first and second locking members being operatively connected to the end plate proximate respective opposite ends of the end plate and movable between a first position and a second position when the end plate is in the fixed stretching position; wherein the respective locking members prevent the end plate from being disengaged from the fixed stretching position when each of the respective locking members are in the first position, and wherein the end plate can be disengaged from the fixed stretching position when the respective locking members are each in the second position;

an elongated member secured to respective first and second locking members such that force can be placed upon each respective locking member by pulling the elongated member so as to draw each of the respective locking members away from the respective first position toward the respective second position; and

a pivotal turn knob interconnected with the elongated member, the turn knob being configured to draw each of the respective first and second locking members generally toward a region between the two first and second locking members and out of the respective first position when a force is placed upon the turn knob that causes the turn knob to pivot with respect to an axis about which the turn knob turns, thereby urging the respective first and second locking members toward the second position wherein the end plate can be disengaged from the fixed stretching position.

1 2. The tonneau cover apparatus according to claim 1, wherein each of the
2 respective locking members are spring biased toward the first position and the
3 elongated member is secured to each of the respective locking members such
4 that force can be placed upon each respective locking member by pulling the
5 elongated member in opposition to the respective spring biasing force biasing
6 each of the respective locking members toward the respective first positions and
7 drawing each of the respective locking members away from the respective first
8 position toward the respective second position.

1 3. The tonneau cover apparatus according to claim 1, wherein the elongated
2 member is a flexible member.

1 4. The tonneau cover apparatus according to claim 1, wherein each of the
2 opposing side rails include an inwardly extending flange portion and each locking
3 member includes a finger portion, the finger portion of each locking member
4 being engaged with the inwardly extending flange portion of the respective
5 opposing side rail when the respective locking member is in a first position, the
6 finger portion of each of the respective locking members disengaging from the
7 inwardly extending flange portion of the respective side rail when the respective
8 locking member is moved from the first position to the second position.

1 5. The tonneau cover apparatus according to claim 1, wherein the end plate
2 has an underside and each respective locking member is operatively connected
3 to the underside of the end plate.

1 6. The tonneau cover apparatus according to claim 1, wherein each of the
2 respective first and second locking members are biased toward the first position
3 and force is required to displace each of the respective first and second locking
4 members from the first position.

1 7. The tonneau cover apparatus according to claim 6, wherein each
2 respective locking member is spring biased toward the first position.

1 8. The tonneau cover apparatus according to claim 6, wherein each
2 respective locking member is spring biased toward the first position and each
3 respective locking member is operatively connected to an underside of the end
4 plate and positioned in such a manner that the support frame displaces each
5 respective locking member from the first position to the second position for a brief
6 period of time when the end plate pivots with respect to the support frame into
7 the fixed stretching position.

1 9. The tonneau cover apparatus according to claim 6, wherein the end plate
2 includes a pair of springs and each spring is operatively interconnected between
3 the end plate and one of the respective locking members so as to provide a

4 biasing force between the end plate and the respective locking member such that
5 each of the respective locking members are biased toward the first position.

1 10. The tonneau cover apparatus according to claim 9, wherein the respective
2 springs are selected from the group consisting of compression springs and
3 tension springs.

1 11. The tonneau cover apparatus according to claim 10, wherein the spring is
2 a tension spring.

1 12. The tonneau cover apparatus according to claim 10, wherein the spring is
2 a compression spring.

1 13. The tonneau cover apparatus according to claim 1, wherein each
2 respective side rail includes an inwardly extending flange portion and each
3 respective locking member
4 includes an outwardly extended finger portion, the finger portion of each
5 respective locking member being engaged with each respective inwardly
6 extending flange portion adjacent to the end plate and rearward of the respective
7 first and second engagement positions with respect to the forward end when the
8 tonneau cover apparatus is attached to the cargo box and each respective
9 locking member is in the first position, the finger portion of each respective
10 locking member disengaging from the respective inwardly extending flange

11 portion when the respective locking member is moved from the first position to
12 the second position.

1 14. The tonneau cover apparatus according to claim 13, wherein each
2 respective locking member has an upper portion having a main body which is
3 slidably retained by the end plate, each respective finger portion is spaced apart
4 from each respective upper portion and extends outwardly beyond the main body
5 of the upper portion, and each respective locking member is biased toward the
6 respective first position and force is required to displace each respective locking
7 member from the first position.

1 15. The tonneau cover apparatus according to claim 13, wherein each
2 respective locking member includes an upper portion having a main body which
3 is slidably retained by the end plate, and the finger portion is spaced apart from
4 the upper portion and extends outwardly beyond the main body of the upper
5 portion.

1 16. The tonneau cover apparatus according to claim 15, wherein the end plate
2 includes a generally "T" shaped channel and a cross-section of the upper portion
3 of each respective locking member is generally "T" shaped, the generally "T"
4 shaped channel of the end plate configured to slidingly receive and retain the
5 generally "T" shaped cross-section of the upper portion.

1 17. The tonneau cover apparatus according to claim 16, wherein each
2 respective locking member further includes oppositely disposed guide strips
3 positioned between interior surfaces of the generally "T" shaped channel and an
4 exterior surface of the generally "T" shaped upper portion of the locking member,
5 the respective guide strips each imparting a frictional force which resists motion
6 between the generally "T" shaped upper position of the locking member as it
7 moves within the generally "T" shaped channel of the end plate.

1 18. The tonneau cover apparatus according to claim 16, wherein the generally
2 "T" shaped upper portion of each respective locking member includes a friction
3 imparting element and two oppositely opposed guide strips, the friction imparting
4 element extending beyond the main body of the generally "T" shaped upper
5 portion of each respective locking member to slidingly engage an interior surface
6 of the generally "T" shaped channel, the friction imparting element and the
7 respective guide strips creating frictional forces which resist motion by each
8 respective locking member as each respective locking member moves relative to
9 the end plate.

1 19. The tonneau cover apparatus according to claim 18, wherein the friction
2 imparting element is attached to an exterior surface of the generally "T" shaped
3 upper portion of each respective locking member and the exterior surface of the
4 upper element onto which the friction imparting element is attached is a top
5 surface.

1 20. The tonneau cover apparatus according to claim 19, wherein the friction
2 imparting element comprises a strip of a loop portion of a hook and loop type
3 strip fastener, the strip extending along the longitudinal extent of the upper
4 member.

1 21. The tonneau cover apparatus according to claim 2, further including a pair
2 of springs secured both to the end plate and to one of the respective locking
3 members, the elongated member being secured to the respective locking
4 members and the turn knob in such a way that the elongated member draws
5 each of the respective locking members away from the respective first position
6 and compresses each of the respective springs when the turn knob is turned
7 from a resting position.

1 22. The tonneau cover apparatus according to claim 21, wherein the turn knob
2 includes a slot within which the elongated member is secured so that the
3 elongated member draws each of the respective locking members away from the
4 respective first position and compresses each of the respective springs when the
5 turn knob is turned from a resting position.